

F U R B A L L # 0

On
Wikileaks,
Bitcoin,
Copyleft
Three
Critiques of
Hacktivism

The Wine and Cheese Appreciation Society
of Greater London / Kittens Editorial Collective

Contents

Foreword 3

WikiLeaks: the State Persecutes its Idealists 5

Bitcoin: Finally, Fair Money? 13

Free Property: on Social Criticism
in the Form of a Software Licence 31

Foreword

We're doing this not only because we are opposed to [...] the racist Arizona police state, but because we want a world free from police, prisons and politicians altogether.¹

While most expressions of hacktivism lack this revolutionary vigour expressed in one of the later communiqués by now infamous hacking collective AntiSec, hacktivism is widely appreciated for its radical potential. Wikileaks and hacking crews are considered by some as anarchist special forces striking blows against the forces of domination. Bitcoin is regarded as a practical approach to break the power of capital. Free software is thought of as a model for future production beyond capitalism. We disagree.

This booklet collects our writings on activism in the digital realm produced over the last few years. In our piece on Wikileaks—which first appeared in Kittens #1—we critique Wikileaks' appreciation of the bourgeois-democratic state which persecutes it. The article on Bitcoin—which previously appeared in Mute Magazine Vol. 3, No. 3—deals with the political economy of the digital currency and critiques the Libertarian ideology driving it. Finally, our piece on free software and other digital commons—which has not previously been published—portrays how 'copyleft' software licences are still expressions of appreciation for the social conditions we are forced to live under.

All three pieces critique both the fallacies inherent in the reasoning behind these projects as well as left-wing hopes attached to them. As such, it might strike the reader as arrogant sneering from the sidelines. However, this is not the intent of this work. We hold that the project

1 AntiSec, Chinga La Migra III, <http://goo.gl/EQXUT> (thepiratebay.se) (access blocked in the UK). AntiSec are promptly criticised in a comment below their statement: "Well, while I support what you're doing, that is simply

ridiculous. Politicians, maybe, but police and prisons are needed—society wouldn't work without them. Police brutality, and corruption, on the other hand, SHOULD be eradicated."

of transforming the existing social conditions must start from a correct understanding of these conditions to avoid reproducing them. In this spirit, this booklet is an invitation to critique. We welcome any comments, critique and review engaging with what we have to say. We can be reached at:

e-mail: wineandcheese@hush.com

OpenPGP fingerprint: 8545 FCE5 2048 C7A1 CC84 DCA1 D174
778D B34D C861

www: <http://antinationa1.org/en>

twitter: @portandcheddar

The Wine & Cheese Appreciation Society of Greater London
January 2013, London, UK

WikiLeaks: the State Persecutes its Idealists

The premise of the WikiLeaks project is that the exposure of governmental and corporate secrets is the critique of those parties. The project and its manifesto—written by Julian Assange before WikiLeaks took off—is concerned with fighting conspiracies, acts carried out in hiding, away from the prying eyes of the public. WikiLeaks detects these hidden agendas in authoritarian regimes and—as a tendency—in some democratic governments.¹ Against those tendencies, WikiLeaks does not argue its point or its political position, since it assumes that exposing the secrets of those who are in power suffices to upset the suppressed masses: “Authoritarian regimes give rise to forces which oppose them by pushing against the individual and collective will to freedom, truth and self realization. Plans which assist authoritarian rule, once discovered, induce resistance. Hence these plans are concealed by successful authoritarian powers.”² What WikiLeaks aims to accomplish is to reveal these concealed plans so that democratic resistance for freedom, truth and self realization is induced. According to WikiLeaks, if the people do not rebel, it is because they do not know about the sinister plans of their governments.

WikiLeaks claims that authoritarian rule and authoritarian tendencies within democratic governments are characterised by their operation in hiding. However it is no secret that profit is the driving motive behind corporations, that the USA and its allies are fighting deadly wars in Iraq and Afghanistan for their own national interests, and that the US government considers WikiLeaks to be an enemy of the state. These things are not suppressed information; on the contrary, they are openly declared and discussed. That Hosni Mubarak ruled Egypt for 30 years, that his police tortured and suppressed any opposition using a 30 year

1 “Today, with authoritarian governments in power in much of the world, increasing authoritarian tendencies in democratic governments, and increasing amounts of power vested in unaccountable corporations, the need

for openness and transparency is greater than ever.”

<http://goo.gl/eT7GX> (wikileaks.org)

2 WikiLeaks Manifesto, <http://goo.gl/IasPG> (thecommentfactory.com)

state-of-emergency law, that the USA backed this rule because of its interests in the region, that the EU negotiated a free trade agreement with the Egyptian regime and that the EU cherished Gaddafi's Libya for its contribution to keeping refugees from entering Europe: all this is public record. There are also actions and policies by authoritarian and democratic governments which are secret, such as extra-legal killings, torture, intelligence gathering, renditions and some deals with other states or corporations. But this does not imply that these governments' rule is primarily characterised by what their subjects do not know about. On the contrary, a regime which tortures its enemies to intimidate them wants them to know about it, so that they shy away from their plans.

WikiLeaks proposes that transparency leads to good governance, to a better life for the subjects. However, if a government truthfully reports that the current debt crisis requires large scale cuts to social services, this is transparency; if the US government openly declares its enmity to WikiLeaks, this is transparency; if the law informs someone that his material needs count only insofar they are effective demand, this is transparency; if a state mobilises its population to militarily defeat the mobilised population of another state, this is transparency. Transparency in itself does not prevent harm: rather, most of the misery is wrought in the open.³

In characterising "successful authoritarian powers" as anxious to hide their own character for fear of resistance, WikiLeaks disregards the purposes of domination. Before asking how something is achieved, one must determine its intended purpose. Both modern authoritarian and democratic states demand much more than merely to maintain themselves. Since a strong economy is the basis of any state's power,

3 WikiLeaks posits an opposition between hoarding information and publishing it: "By definition, intelligence agencies want to hoard information. By contrast, WikiLeaks has shown that it wants to do just the opposite." However, intelligence agencies do publish information, that is, when it suits their agenda. They use information to embarrass or intimidate competing

states and their governments. It is not its admiration for WikiLeaks' idealism of democracy which caused China to promote WikiLeaks as a candidate for the Nobel peace prize; China proposed WikiLeaks because it embarrasses the USA and in order to demonstrate the function of the Nobel prize as a title by the USA and its allies against its competitors.

especially so under capitalism, the state's subjects are not merely tedious masses but useful material.⁴ States spend considerable effort fostering their economies, jealously compare GDPs—the overall economic activity of one country—with other states, closely watch currency exchange rates and stock indices: they compare the economic performance of their populations because it is the basis of their power. But the population's contribution to the might of the state does not end with its economic activity. The state wants its subjects to cherish it, to support its policies.⁵ When it is deemed necessary the state even demands that its population go to war. These purposes cannot be achieved secretly, they must be publicised.

WikiLeaks' practical critique of governments across the globe is driven by its appreciation for the institution of government as such. WikiLeaks aims to induce a resistance which aims to “shift regime behavior”⁶, not to end regimes. The prospect of getting rid of domination—i.e. systematic and forceful rule—and the idea that regimes are only necessary because of the conditions they establish, is not present in WikiLeaks publications or actions. Accusing the WikiLeaks project of being anarchist, possibly opposed to governments and corporations in principle, is wrong. On the contrary, WikiLeaks' activism is driven by the assumption that the democratic state as such deserves defense and not fundamental critique.

WikiLeaks promotes the raw publication of unpublished data, without commentary, since the data itself ought to spark resistance. Yet, it is not information—facts—as such that gets people to oppose certain policies—but how people interpret these facts. The slaughter of Iraqi civilians by US troops is interpreted by opponents of the war in Iraq as yet another reason to stop the war. Others might take away the message

4 There are indeed some states where the population is of no use to the state since these states have their economic basis simply in exporting their natural resources. In such states the population is mainly kept away from the sources of revenue for the state. The Sudan is, besides most countries in the 'Third World', such a state which expects little of its population and has little to

offer to it, because it cannot compete on the world market against successful economic powers such as the USA, the EU and China.

5 Democratic states even invite their populations to choose the agents of the state. See *You mean they actually vote for the lizards?* in kittens #1 available at <http://goo.gl/HYt8Y> (antinational.org)

6 WikiLeaks Manifesto

that war had ugly sides yet that those are unfortunately necessary, that the insurgents are to blame since they would hide behind civilians, that those killed should not be out in the streets in a war zone or that those ‘subhumans’ deserve no better. The facts only provide the material for verdicts, they do not determine verdicts. This is especially so when most of the data that reached the public through WikiLeaks only confirmed what everybody knew already: “This is a description of the Afghan War that a bright 10-year-old could have given you without the benefit of [...] 90,000 leaked documents.”⁷ All that previously unknown facts can provide is a necessary precondition for new verdicts that might be impossible to make without them.

WikiLeaks’ ideal of a state is one that is measured by the principles of the democratic state.⁸ A modern democratic state presents itself as a service to its subjects and as an expression of the will of those subjects. It grants its subjects rights and freedoms, it asks its subjects to select its agents, it provides basic infrastructure for their economic activities and it provides some social security. That the state establishes the conditions which force its subjects to rely on the state does not change this fact. WikiLeaks agrees with these principles: “Better scrutiny leads to reduced corruption and stronger democracies in all society’s institutions, including government, corporations and other organisations.”⁹ Restricting oneself to battling corruption in government and corporations implies that it is not the principles of these organisations which ought to be blamed for the observed misery, but the deviation from those principles.¹⁰

7 <http://goo.gl/3BQZs> (spiked-online.com)

8 “In its landmark ruling on the Pentagon Papers, the *US Supreme Court* ruled that ‘only a free and unrestrained press can effectively expose deception in government.’ We agree. Publishing improves transparency, and this transparency creates a better society for all people. Better scrutiny leads to reduced corruption and stronger democracies in all society’s institutions, including government, corporations and other organisations. A healthy, vibrant and inquisitive journalistic media plays a vital role

in achieving these goals. We are part of that media.” <http://goo.gl/eT7GX> (wikileaks.org) (emphasis added)

9 <http://goo.gl/eT7GX> (wikileaks.org)

10 “Similarly, some intelligence services have an obligation to go about their activities to the best of their ability and that, sometimes, involve secrecy. But, what is not a right, is for a General or, Hillary Clinton, to say that they want to use the criminal law on every person in the country, to stop talking about embarrassing information, that has been revealed from her institution or from US military. She does not have

Thus, WikiLeaks' fight against corruption indicates support in principle for those organisations once they are free of corruption. When WikiLeaks agrees with the US Supreme Court about "effectively expos[ing] deception in government"¹¹, this is no rhetorical trick—they both want effective institutions, the institutions of the current social order. Both WikiLeaks and the US constitution share the ideal of a democratic, capitalist state which fosters its citizens' 'pursuit of happiness'.

Some of WikiLeaks' distrust of those who are in power is also institutionalised in the state. The institutional set-up of the state reveals a considerable lack of trust in those who hold office, it reveals the suspicion that the state's agents might secretly (or openly) abuse their power. Law requires regular elections and thus ensures that the collective will of the people corresponds to that of politicians.¹² Some countries even have term limits for the highest offices in order to prevent one person from clinging to power. Law mandates a division of powers between the government, parliament and the courts so that no branch can appropriate the power vested in it for purposes other than those in their job description. Law guarantees freedom of press, speech and assembly and thus allows the democratic opposition to voice its concerns. Also, presidential candidates sometimes pledge to "strengthen whistleblower laws to protect federal workers who expose waste, fraud, and abuse of authority in government"¹³. The democratic state is a state of law and as such suspicious about its agents who exercise this law.

This institutionalised distrust is not without reason. First, these agents are people who—like everyone else—have private interests, yet their job is to maintain the order in disregard of particular private interests. If bourgeois society is a society of competing subjects then recruiting from this society carries some risk. These agents might abuse their power to pursue their own agenda, by accepting bribes or by

the right to proclaim what the worry is, that's a matter for the court." Julian Assange in an interview on *Frost over the World* on Al Jazeera (21.12.2010).

11 <http://goo.gl/eT7GX> (wikileaks.org)

12 This goes both ways. The leadership shall not stray too far from the people

and the people shall realise where the national problems lie. See *You mean they actually vote for the lizards?* in kittens #1 available at <http://goo.gl/HYt8Y> (antinationa1.org)

13 <http://goo.gl/5asd6> (change.gov)

bending law to benefit their friends.¹⁴ It is this kind of misapprehension of positions of power against the state's rules, regulations and separation of power is aimed. It is also this kind of corruption against which people like the US president want to mobilise whistleblowers.

The second reason for distrust is that the checks and balances of a democratic state get in the way of effective government. A limit on the power of the government is a limit on its ability to do its job. The checks and balances are blind towards what the government tries to accomplish and thus may hinder it in pushing through policies which are in the national interest. This is why politicians and other agents of the state who have the highest admiration for democracy and the rule of law regularly bend the rules—illegal wiretaps, rendition, etc. Whether these kind of transgressions are treated as violations of the principles of the state or not cannot be decided a priori. This depends on the success of these policies. Avoiding a possible conviction for such a digression (whether it is for personal enrichment or doing the best for the nation without following the law) is one reason why state agents may choose to try to keep certain actions away from public.

Thus the US campaign against WikiLeaks, which is backed by its international allies and both big parties in the USA, is aimed against a project which is fundamentally supportive of the state as such. It is running a campaign against people who have the highest admiration for its principles. The people who are declared enemies of the state are driven to their actions by their admiration for the principles of the state.

It could seem like a miscalculation on the end of the US administration and other governments to attack WikiLeaks: both seem to be in favour of the same principles. However, there is a fundamental difference as to what role these principles play for both sides. For WikiLeaks and its supporters democratic principles are the first and grounding principles of the state, it is what makes the state. For the state, on the other hand, these principles are means of domination. Just because the state provides services to its citizens does not imply

14 To avoid a misunderstanding: if certain policies benefit some people more than others this does not violate the purpose of democratic rule. However, if policy is

made solely to benefit a particular group in disregard of the national interest, it generally does.

its role is restricted to this provision. If that were the case, no coppers, courts and prisons would be needed. Just because the state is a state of law and principles, just because it seeks the support of its subjects, just because it aims to use the private interests of its subjects productively for its own power, does not mean that its rule is no domination and requires no secrecy. It still suppresses interests which fundamentally oppose its rule. In general, it presents boundaries to any interest of its subjects: one may pursue one's own interest—but in accordance with the law.¹⁵ Put differently, just because the state fosters and protects some legitimate private interests, this does not imply—contrary to WikiLeaks' belief—that its ultimate goal is to guarantee the well-being of its subjects: benevolent domination is a contradiction.

Second, the publication of the diplomatic cables and internal military reports by WikiLeaks does threaten the US internationally. Public statements by agents of the state—especially within the realm of international diplomacy—are considered to be expressions of policy. An open critique of another state or its personnel is an attempt to show this state its limits or to probe these limits. The official account of one's own war efforts is aimed to send a message to friend and foe.¹⁶ By publishing internal US memos WikiLeaks made policy for the USA, it made the US government say things it did not want to say in public, sending all kinds of messages to governments across the globe. The point here is not whether these cables contain news in terms of factual statements. The point is that the US government did not want to say these things to its allies and enemies openly; WikiLeaks made the US government say it regardless. WikiLeaks forced the hand of US foreign policy by publishing those memos. In reaction the state interprets this attack as a very principle questioning of its rule—regardless of WikiLeaks' intentions.

The US campaign against WikiLeaks is conflicted. On the one hand, there are calls by some politicians for Assange's assassination and the US administration is looking for legal loopholes to charge Assange.

15 See *Private property, exclusion and the state* in kittens #0 available at <http://goo.gl/R7dFt> (antination.org)

16 Additionally, allies of the USA started to wonder in public whether it was safe

to share sensitive information with US officials in light of the leaks. This might limit the US' ability to collect this kind of information.

Bradley Manning—the alleged whistleblower who leaked the cables and other internal US documents—is likely to rot in prison for a long time to make an example of those who threaten the state. On the other hand, WikiLeaks still is not illegal in the USA, and hardly any regard has been given to e.g. the New York Times, which collaborated with WikiLeaks on the release of the diplomatic cables.¹⁷ The state does want to shut down WikiLeaks but it hesitates to dismantle the freedom of press in the process. The state want citizens like Julian Assange, but these good citizens should consider the reality of the state they are subject to before acting on their idealist conception.

17 The difference in treatment of the NYT and WikiLeaks also shows what kind of press the state has an interest in. As a 'fourth branch of government' the press exposes inefficiencies and outright corruption. On the other hand, the NYT insists—against all evidence to the

contrary—on not calling interrogation tactics by US troops 'torture', underlining its pledge of allegiance to the American state. WikiLeaks, on the contrary, is not obstructed by patriotism in demanding its ideal of the state to be fulfilled.

Bitcoin: Finally, Fair Money?

In 2009 Satoshi Nakamoto invented a new electronic or virtual currency called Bitcoin, the design goal of which is to provide an equivalent of cash on the Internet.¹ Rather than using banks or credit cards to buy stuff online, a Bitcoin user will install a piece of software, the Bitcoin client, on her computer and send Bitcoin directly to other users under a pseudonym.² One simply enters into the software the pseudonym of the person one wishes to send Bitcoin and the amount to send and the transaction will be transmitted through a peer-to-peer network.³ What specifically one can get with Bitcoin is somewhat limited to the few hundred websites which accept them, but includes other currencies, web hosting, server hosting, web design, DVDs, coffee in some coffee shops, and classified adverts, as well as the ability to use online gambling sites despite being a US citizen and to donate to Wikileaks.⁴ However, what allowed Bitcoin to break into the mainstream—if only for a short period of time—is the Craigslist-style website Silk Road which allows anyone to trade Bitcoin for prohibited drugs.⁵

On February 11th 2012, 1 BTC exchanged for 5.85 USD. So far 8.31 million BTC were issued, 0.3 million BTC were used in 8,600

1 This text is a slightly revised version of a text which first appeared on <http://metamute.org>.

2 The central white paper on Bitcoin is *Bitcoin: A Peer-to-Peer Electronic Cash System* by Satoshi Nakamoto, the Bitcoin creator. However, some details of the network are not explicitly described anywhere in the literature but only implemented in the official Bitcoin client. As far as we know, there is no official specification except for <http://goo.gl/s0kUp> (bitcoin.it).

3 A peer-to-peer network is a network where nodes connect directly, without the need of central servers (although some functions might be reserved to

servers). Famous examples include Napster, BitTorrent and Skype.

4 Probably due to pressure from the US government all major online payment services stopped processing donations to the Wikileaks project—see <http://goo.gl/CulVM> (bbc.co.uk). Also, most US credit card providers prohibit the use of their cards for online gambling.

5 After Gawker media published an article about Silk Road (<http://goo.gl/iXMTm>) two US senators became aware of it and asked congress to destroy it. So far, law enforcement operations against Silk Road seem to have been unsuccessful.

transactions in the last 24 hours and about 800 Bitcoin clients were connected to the network. Thus, it is not only some idea or proposal of a new payment system but an idea put into practice, although its volume is still somewhat short of the New York Stock Exchange.

The three features of cash which Bitcoin tries to emulate are anonymity, directness and lack of transaction costs, all of which are wanting in the dominant way of going about e-commerce using credit or debit cards or bank transfers. It is purely peer-to-peer just like cash is peer-to-peer. So far, so general.

But what makes the project so ambitious is its attempt to provide a new currency. Bitcoin are not a way to move Euros, Pounds or Dollars around, they are meant as a new money in itself; they are denominated as BTC not GBP. In fact, Bitcoin are even meant as a money based on different principles than modern credit monies. Most prominently, there is no ‘trusted third party’, no central bank in the Bitcoin economy and there is a limited supply of 21 million ever. As a result, Bitcoin appeals to libertarians who appreciate the free market but are sceptical of the state and in particular state intervention in the market.

Because Bitcoin attempts to accomplish something well-known—money—using a different approach, it allows for a fresh perspective of this ordinary thing, money. Since the Bitcoin project chose to avoid a trusted third-party in its construction, it needs to solve several ‘technical’ problems or issues to make it viable as money. Hence, it points to the social requirements and properties which money has to have.

In the first part of this text we want to both explain how Bitcoin works using as little technical jargon as possible and also show what Bitcoin teaches about a society where free and equal exchange is the dominant form of economic interaction. In the second part we then want to criticise Bitcoin’s implicit position on credit money. From this also follows a critique of central tenets of the libertarian ideology.

The first thing one can learn from Bitcoin is that the characterisation of the free market economy by the (libertarian) Bitcoin adherents (and most other people) is incorrect; namely, that exchange implies:

Mutual benefit, cooperation and harmony

Indeed, at first sight, an economy based on free and equal exchange might seem like a rather harmonious endeavour. People produce stuff

in a division of labour such that both the coffee producer and the shoemaker get both shoes and coffee; and this coffee and those shoes reach their consumers by ways of money. The activity of producers is to their mutual benefit or even to the benefit of all members of society. In the words of one Bitcoin partisan:

If we're both self-interested rational creatures and if I offer you my X for your Y and you accept the trade then, necessarily, I value your Y more than my X and you value my X more than your Y. By voluntarily trading we each come away with something we find more valuable, at that time, than what we originally had. We are both better off. That's not exploitative. That's cooperative.⁶

In fact, it is consensus in the economic mainstream that cooperation requires money and the Bitcoin community does not deviate from this position:

A community is defined by the cooperation of its participants, and efficient cooperation requires a medium of exchange (money)...⁷

Hence, with their perspective on markets, the Bitcoin community agrees with the consensus among modern economists: free and equal exchange is cooperation and money is a means to facilitate mutual accommodation. They paint an idyllic picture of the 'free market' whose ills should be attributed to misguided state intervention and sometimes misguided interventions of banks and their monopolies.⁸

6 <http://goo.gl/jf7Qw> (bitcoin.org)

7 Wei Dai, *bmoney.txt*, <http://goo.gl/RFCaU> (weidai.com). This text outlines the general idea on which Satoshi Nakamoto based his Bitcoin protocol.

8 "The Real Problem with Bitcoin is not that it will enable people to avoid taxes or launder money, but that it threatens the elites' stranglehold on the creation and distribution of

money. If people start using Bitcoin, it will become obvious to them how much their wage is going down every year and how much of their savings is being stolen from them to line the pockets of banksters and politicians and keep them in power by paying off with bread and circuses those who would otherwise take to the streets."—<http://goo.gl/C2OoT> (undergroundeconomist.com)

Cash

One such state intervention is the provision of money and here lies one of Bitcoin's main features: its function does not rely on a trusted third-party or even a state to issue and maintain it. Instead, Bitcoin is directly peer-to-peer not only in its handling of money—like cash—but also in the creation and maintenance of it, as if there was no Bank of England but there was a protocol by which all people engaged in the British economy collectively printed Sterling and watched over its distribution. For such a system to accomplish this, some 'technical' challenges have to be resolved, some of which are trivial, some of which are not. For example, money needs to be divisible, e.g., two five pound notes must be the same as one ten pound note, and each token of money must be as good as another, e.g., it must not make a difference which ten pound note one holds. These features are trivial to accomplish when dealing with a bunch of numbers on computers, however, two qualities of money present themselves as non-trivial.

Digital signatures: guarantors of mutual harm

Transfer of ownership of money is so obvious when dealing with cash that it is almost not worth mentioning or thinking about. If Alice hands a tenner to Bob, then Bob has the tenner and not Alice. After an exchange (or robbery, for that matter) it is evident who holds the money and who does not. After payment there is no way for Alice to claim she did not pay Bob, because she did. Neither can Bob transfer the tenner to his wallet without Alice's consent except by force. When dealing with bank transfers etc., it is the banks who enforce this relationship, and in the last instance it is the police.

One cannot take this for granted online. A banknote is now represented by nothing but a number or a string of bits. For example, let US say 0xABCD represents 1 BTC (Bitcoin).⁹ One can copy it easily and it is impossible to prove that one does not have this string stored anywhere, i.e., that one does not have it any more. Furthermore, once

9 For those who know a few technical details of Bitcoin: we are aware that Bitcoin are not represented by anything but a history of transactions.

However, for ease of presentation we assume there is some unique representation—like the serial number on a five pound note.

Bob has seen Alice's note he can simply copy it. Transfer is tricky: how do I make sure you really give your Bitcoin to me?¹⁰

This is the first issue virtual currencies have to address and indeed it is addressed in the Bitcoin network.

To prove that Alice really gave 0xABCD to Bob, she digitally signs a contract stating that this string now belongs to Bob and not herself. A digital signature is also nothing more than a string or big number. However, this string/number has special cryptographic/mathematical properties which make it—as far as we can ascertain—impossible to forge. Hence, just as people normally transfer ownership, say a title to a piece of land, money in the Bitcoin network has its ownership transferred by digitally signing contracts. It is not the note that counts but a contract stating who owns the note. This problem and its solution—digital signatures—is by now so well established that it hardly receives any attention, even in the Bitcoin design document.¹¹

Yet, the question of who owns which Bitcoin in itself starts to problematise the idea of harmonic cooperation held by people about economy and Bitcoin. It indicates that in a Bitcoin transaction, or any act of exchange for that matter, it is not enough that Alice, who makes coffee, wants shoes made by Bob and vice versa. If things were as simple as that, they would discuss how many shoes and how much coffee was needed, produce it and hand it over. Everybody happy.

Instead, what Alice does is to exchange her stuff for Bob's stuff. She uses her coffee as a lever to get access to Bob's stuff. Bob, on the other hand, uses his shoes as a leverage against Alice. Their respective products are their means to get access to the products they actually

10 "Commerce on the Internet has come to rely almost exclusively on financial institutions serving as trusted third parties to process electronic payments. [...] Completely non-reversible transactions are not really possible, since financial institutions cannot avoid mediating disputes. [...] With the possibility of reversal, the need for trust spreads. Merchants must be wary of their customers, hassling them for more information than they would

otherwise need. A certain percentage of fraud is accepted as unavoidable. These costs and payment uncertainties can be avoided in person by using physical currency, but no mechanism exists to make payments over a communications channel without a trusted party."—Satoshi Nakamoto, op. cit.

11 For an overview of the academic state-of-the-art on digital cash see Burton Rosenberg (Ed.), *Handbook of Financial Cryptography and Security*, 2011.

want to consume. That is, they produce their products not to fulfil their own or somebody else's need, but to sell their products such that they can buy what they need. When Alice buys shoes off Bob, she uses her money as a leverage to make Bob give her his shoes; in other words, she uses his dependency on money to get his shoes. Vice versa, Bob uses Alice's dependence on shoes to make her give him money.¹² Hence, it only makes sense for each to want more of the other's for less of their own, which means deprive the other of her means: what I do not need immediately is still good for future trades. At the same time, the logic of exchange is that one wants to keep as much of one's own means as possible: buy cheap, sell dear. In other words, they are not expressing this harmonious division of labour for the mutual benefit at all, but seeking to gain an advantage in exchange, because they have to. It is not that one seeks an advantage for oneself but that one party's advantage is the other party's disadvantage: a low price for shoes means less money for Bob and more product for her money for Alice. This conflict of interest is not suspended in exchange but only mediated: they come to an agreement because they want to but that does not mean it would not be preferable to just take what they need.¹³ This relation they have with each other produces an incentive to cheat, rob, steal.¹⁴ Under these conditions—a systematic reason to cross each other—answering the question who holds the tenner is very important.

This systemic production of circumstances where one party's advantage is the other party's disadvantage also produces the need for a monopoly on violence of the state. Exchange as the dominant medium of economic interaction and on a mass scale is only possible if parties in general are limited to the realm of exchange and cannot simply take what they need and want. The libertarians behind Bitcoin might detest

12 To avoid a possible misunderstanding. That money mediates this exchange is not the point here. What causes this relationship is that Alice and Bob engage in exchange on the basis of private property. Money is simply an expression of this particular social relation.

13 Of course, people do shy away from stealing from each other. Yet, this does not mean that it would not be

advantageous to do so.

14 The Bitcoin designers were indeed aware of these activities of direct appropriation and the need to protect the possible victim. "Transactions that are computationally impractical to reverse would protect sellers from fraud, and routine escrow mechanisms could easily be implemented to protect buyers."—Satoshi Nakamoto, *op. cit.*

state intervention, but a market economy presupposes it. When Wei Dai describes the online community as “a community where the threat of violence is impotent because violence is impossible, and violence is impossible because its participants cannot be linked to their true names or physical locations.”¹⁵ he not only acknowledges that people in the virtual economy have good reasons to harm each other but also that this economy only works because people do not actually engage with each other. Protected by state violence in the physical world, they can engage in the limited realm of the Internet without the fear of violence.

The fact that ‘unbreakable’ digital signatures—or law enforced by the police—are needed to secure such simple transactions as goods being transferred from the producer to the consumer implies a fundamental enmity of interest of the involved parties. If the libertarian picture of the free market as a harmonic cooperation for the mutual benefit of all was true, they would not need these signatures to secure it. The Bitcoin construction—their own construction—shows their theory to be wrong.

Against this, one could object that while by and large trade was a harmonious endeavour, there would always be some black sheep in the flock. In that case, however, one would still have to inquire into the relationship between effort (the police, digital signatures, etc.) and the outcome. The amount of work spent on putting those black sheep in their place demonstrates rather vividly that it is expected there would be many more of them without these countermeasures. Some people go still further and object on the more principal level that it is all down to human nature, that it is just how humans are. However, by saying that, one first of all agrees that this society cannot be characterised as harmonic. Secondly, the statement “that’s just how it is” is no explanation, though it claims to be one. At any rate, we have tried to give some arguments above as to why people have good reason to engage with each other the way they do.

Purchasing power

With digital signatures only those qualities of Bitcoin which affect the relation between Alice and Bob are treated, but when it comes to money the relation of Alice to the rest of society is of equal importance.

15 Wei Dai, op. cit.

That is, the question needs to be answered how much purchasing power Alice has. When dealing with physical money, Alice cannot use the same banknote to pay two different people. There is no double spending, her spending power is limited to what she owns.

When using virtual currencies with digital signatures, on the other hand, nothing prevents Alice from digitally signing many contracts transferring ownership to different people: it is an operation she does by herself.¹⁶ She would sign contracts stating that 0xABCD is now owned by Bob, Charley, Eve, etc.

The key technical innovation of the Bitcoin protocol is that it solves this double spending problem without relying on a central authority. All previous attempts at digital money relied on some sort of central clearing house which would ensure that Alice cannot spend her money more than once. In the Bitcoin network this problem is addressed by making all transactions public.¹⁷ Thus, instead of handing the signed contract to Bob, it is published on the network by Alice's software. Then, the software of some other participant on the network signs that it has seen this contract certifying the transfer of Bitcoin from Alice to Bob. That is, someone acts as notary and signs Alice's signature and thereby witnesses Alice's signature. Honest witnesses will only sign the first spending of one Bitcoin but will refuse to sign later attempts to spend the same coin by the same person (unless the coin has arrived in that person's wallet again through the normal means). They verify that Alice owns the coin she spends. This witness' signature again is published (all this is handled automatically in the background by the client software).

Yet, Alice could simply collude with Charley and ask Charley to sign all her double spending contracts. She would get a false testimony from a crooked witness. In the Bitcoin network, this is prevented, however,

16 "The problem of course is the payee can't verify that one of the owners did not double-spend the coin."—Satoshi Nakamoto, *op. cit.*

17 "We need a way for the payee to know that the previous owners did not sign any earlier transactions. For our purposes, the earliest transaction is the one that counts, so we don't care about later attempts to double-spend.

The only way to confirm the absence of a transaction is to be aware of all transactions."—Satoshi Nakamoto, *op. cit.* Note that this also means that Bitcoin is far from anonymous. Anyone can see all transactions happening in the network. However, Bitcoin transactions are between pseudonyms which provides some weaker form of anonymity.

by selecting one witness at random for all transactions at a given moment. Instead of Alice picking a witness, it is randomly assigned. This random choice is organised as a kind of lottery where participants attempt to win the ability to be witness for the current time interval. One can increase one's chances of being selected by investing more computer resources. But to have a decent chance one would need about as much computer resources as the rest of the network combined.¹⁸ In any case, for Alice and Charley to cheat they would have to win the lottery by investing considerable computational resources, too much to be worthwhile—at least that is the hope. Thus, cheating is considered improbable since honest random witnesses will reject forgeries.

But what is a forgery and why is it so bad that so much effort is spent, computational resources wasted for solving the aforementioned mathematical puzzle, in order to prevent it? On an immediate, individual level a forged bank note behaves no different from a real one: it can be used to buy stuff and pay bills. In fact, the problem with a forgery is precisely that it is indistinguishable from real money, that it does not make a difference to its users: otherwise people would not accept it. Since it is indistinguishable from real money it functions just as normal money and more money confronts the same amount of commodities and the value of money might go down.¹⁹

So what is this value of money, then? What does it mean? Purchasing *power*. Recall, that Alice and Bob both insist on their right to their own

18 On the Bitcoin network anyone can pretend to be arbitrary many people by creating many pseudonyms. Hence, this lottery is organised in such a way that any candidate has to solve a mathematical puzzle by trying random possible solutions which requires considerable computational resources (big computers). This way, being 'more people' on the network requires more financial investment in computer hardware and electricity. It is just as in the lottery: those who buy many tickets have a higher chance of winning. As a side effect, many nodes on the network waste computational resources solving

some mathematical puzzle by trying random solutions to win this witness lottery.

19 For many people, this is where they content themselves with knowing that the value goes down without ever asking what this 'value' thing is. However, changes in value only make sense if one knows what it is that changes. Furthermore, the relationship of money supply and inflation is not as it might seem: increased money supply does not necessarily imply inflation; only if it is not accompanied by increased economic activity.

stuff when they engage in exchange and refuse to give up their goods just because somebody needs them. They insist on their exclusive right to dispose over their stuff, on their private property. Under these conditions, money is the only way to get access to each other's stuff, because money convinces the other side to consent to the transaction. On the basis of private property, the only way to get access to somebody else's private property is to offer one's own in exchange. Hence, money counts how much wealth in society one can get access to. Money measures private property *as such*. Money expresses how much wealth as such one can make use of: not only coffee or shoes but coffee, shoes, buildings, services, labour-power, anything. On the other hand, money counts how much wealth as such my coffee is worth: coffee is not only coffee but a means to get access to all the other commodities on the market: it is exchanged for money such that one can buy stuff with this money. The price of coffee signifies how much thereof. All in all, numbers on my bank statement tell me how much I can afford, the limit of my purchasing power and hence—reversing the perspective—from how much wealth I am excluded.²⁰

Money is power one can carry in one's pockets; it expresses how much control over land, people, machines, products I have. Thus, a forgery defeats the purpose of money: it turns this limit, this magnitude into an infinity of possibilities, anything is—in principle—up for grabs just because I want it. If everyone has infinity power, it loses all meaning. It would not be effective demand that counts, but simply the fact that there is demand, which is not to say that would be a bad thing, necessarily.

In summary, money is an expression of social conditions where private property separates means and need. For money to have this quality it is imperative that I can only spend what is mine. This quality,

20 From this it is also clear that under these social conditions—free and equal exchange—those who have nothing will not get anything, aka the poor stay poor. Of course, free agents on a free market never have nothing, they always own themselves and can sell their skin—their labour-power—to others. Yet, their situation is not adequately characterised by pointing out that nature condemns US to work

for the products we wish to consume, as the libertarians have it. Unemployed workers can only find work if somebody else offers them a job, if somebody else deems it profitable to employ them. Workers cannot change which product they offer, they only have one. That this situation is no pony farm can be verified by taking a look at the living conditions of workers and people out of work worldwide.

and hence, this separation of means and need, with all its ignorance and brutality towards need, must be violently enforced by the police and on the Bitcoin network—where what people can do to each other is limited—by an elaborate protocol of witnesses, randomness and hard mathematical problems.²¹

The value of money

Now, two problems remain: how is new currency introduced into the system (so far we only handled the transfer of money) and how are participants convinced to do all this hard computational work, i.e., to volunteer to be a witness. In Bitcoin the latter problem is solved using the former.

In order to motivate participants to spend computational resources on verifying transactions they are rewarded a certain amount of Bitcoin if they are chosen as a witness. Currently, each such win earns 50 BTC plus a small transaction fee for each transaction they witness. This also answers the question of how new coins are created: they are ‘mined’ when verifying transactions. In the Bitcoin network money is created ‘out of thin air’, by solving a pretty pointless problem—that is, the puzzle whose solution allows one to be a witness. The only point of this puzzle is that it is hard, that is all.²² What counts is that other commodities / merchants relate to money as money and use it as such, not how it comes into the world.²³

21 The Bitcoin forum is—among other things—a remarkable source of ignorant and brutal statements about the free market, such as this: “If you want to live then you have to work. That’s nature’s fault (or God’s fault if you’re a Christian). Either way, you have to work to survive. Nobody is obligated to keep you alive. You have the right not to be murdered, you don’t have the right to live. So, if I offer you a job, that’s still a voluntary trade, my resources for your labor. If you don’t like the trade then you can reject it and go survive through your own means or simply lay down and die. It’s harsh but fair. Otherwise, I’d have

to take care of myself and everyone else which is unfair. Requiring me to provide you a living is actual slavery, much worse than nonexistent wage slavery.”—<http://goo.gl/93mcg> (bitcointalk.org)

22 “The only conditions are that it must be easy to determine how much computing effort it took to solve the problem and the solution must otherwise have no value, either practical or intellectual”—Wei Dai, *op. cit.*

23 Those who read Marx’s *Capital* might now object that this implies that Bitcoin is based on a concept of value whose substance is not abstract human labour. Instead it would rely on value which is

Thin air: Bitcoin, credit money and capitalism

However, the amount of Bitcoin one earns for being a witness will decrease in the future—the amount is cut in half every four years. From 2012 a witness will only earn 25 BTC instead of 50 BTC and so forth. Eventually there will be 21 million BTCs in total and no more.

There is no a priori technical reason for the hard limit of Bitcoin; neither for a limit in general nor the particular magnitude of 21 million. One could simply keep generating Bitcoin at the same rate, a rate that is based on recent economic activity in the Bitcoin network or the age of the lead developer or whatever. It is an arbitrary choice from a technical perspective. However, it is fair to assume that the choice made for Bitcoin is based on the assumption that a limited supply of money would allow for a better economy; where ‘better’ means more fair, more stable and devoid of state intervention.²⁴ Libertarian Bitcoin adherents and developers claim that by ‘printing money’ states—via their central banks—devalue currencies and hence deprive their subjects of their assets.²⁵ They claim that the state’s (and sometimes the banks’) ability of creating money ‘out of thin air’ would violate the principles of free market because they are based on monopoly instead of competition. Inspired by natural resources such as gold,

abstract computer labour or something else entirely. This objection is based on a misunderstanding: computing power earns, if one is lucky, 50 BTC but this is just a number, it is meaningless. What 50 BTC buy, how much purchasing power or command over social wealth they represent is an entirely different question. 50 BTC have value because they command social wealth not because a computer picked the right random number.

24 “The root problem with conventional currency is all the trust that’s required to make it work. The central bank must be trusted not to debase the currency, but the history of fiat currencies is full of breaches of that trust. Banks must be trusted to hold our money and transfer it electronically, but they lend it out in

waves of credit bubbles with barely a fraction in reserve. We have to trust them with our privacy, trust them not to let identity thieves drain our accounts. Their massive overhead costs make micropayments impossible.”—Satoshi Nakamoto quoted in Jashua Davis, *The Crypto-Currency: Bitcoin and Its Mysterious Inventor*, *The New Yorker*, 10 October, 2011.p. 62.

25 We stress that opposing states increasing the ‘money supply’ at will and fixing the absolute amount of money that can ever be created are not the same thing. One could just as well keep generating 50 new BTC every 10 minutes until the end of time or the Bitcoin network—whichever comes first.

Satoshi Nakamoto chose to fix a ceiling for the total amount of Bitcoin to some fixed magnitude.²⁶ From this fact most pundits quickly make the transition to the ‘deflationary spiral’ and whether it is going to happen or not; i.e., whether this choice means doom for the currency by exponentially fast deflation—the value of the currency rising compared to all commodities—or not. Indeed, for these pundits the question why modern currencies are credit money hardly deserves attention. They do not ask why modern currencies do not have a limit built in, how credit money came about, if and how it is adequate for the capitalist economy and why the gold standard was departed from in the first place.²⁷ They are not interested in explaining why the world is set the way it is but instead to confront it with their ideal version. Consequently, they miss what would likely happen if Bitcoin or something like it were to become successful: a new credit system would develop.

Growth

Capitalist enterprises invest money to make more money, to make a profit. They buy stuff such as goods and labour-power, put these ‘to work’ and sell the result for more money than they initially spent. They go through cycles of buying—production—selling.²⁸ The faster each of these steps, the faster the advanced investment returns, the faster the profit arrives and the faster new investments can be made. Capitalist success is measured by the difference between investment

26 “The steady addition of a constant amount of new coins is analogous to gold miners expending resources to add gold to circulation. In our case, it is CPU [central processing unit] time and electricity that is expended.”—Satoshi Nakamoto, op. cit. Furthermore, the distribution of how Bitcoin are generated is inspired by gold. In the beginning it is easy to mine but it becomes harder and harder over time. Bitcoin’s mining concept is an attempt to return to gold money but on the Internet.

27 cf. our text *Public debt makes the state go round* available at

<http://goo.gl/JwIE6> (antination.org).

It should be noted that Bitcoin is not an equivalent to a return to the gold standard but a return to paying with gold coins. Even under the gold standard there were many more dollars than the gold they represented, based on the assumption that people would not claim the gold worth of their dollars from the FED.

28 Some companies such as supermarkets do not have a production phase, they simply buy and sell. This difference does not matter for the argument presented here though.

and yield and not by the amount of money someone owns in absolute terms. Of course, the absolute amount of wealth a company owns is a relevant magnitude, because more money is a better basis for augmentation. Yet, in order to decide whether a company did well or poorly in the last quarter, the surplus is usually what counts. For a capitalist enterprise, money is a means and *more* wealth—counted in money—the end: fast growth—that is the mantra.

Libertarian Bitcoin adherents have no problem with this. While currently Bitcoin are mainly used—if at all—to buy means of consumption or as a hoard, they hope that one day something like Bitcoin will replace the US dollar and other central bank controlled currencies: Bitcoin or its successor as the currency to do serious business in. This sets Bitcoin apart from other virtual currencies such as Linden Dollars or World of Warcraft Gold. They are purely used to buy/sell in some limited realm of some virtual world, while Bitcoin are in principle usable for any purchase (on the Internet). Bitcoin want to be money, not just some means of circulation in a virtual reality.

Credit

If money is a means for growth and not the end, a lack of money is not sufficient a reason for the augmentation of money to fail to happen. With the availability of credit money, banks and fractional reserve banking it is evident that this is the case. Just because some company did not earn enough money yet to invest in a new plant, that does not mean it cannot—it would apply for a loan from a bank. That bank in the last instance may have borrowed that money from the central bank which created it 'out of thin air'. However, assume, for the sake of argument, that these things did not exist. Even then, at any given moment, companies (or parts thereof) are necessarily in different stages of their accumulation cycles: some are just starting to sell a large stock of goods while others are looking to buy machines and hire workers. Some companies have money which they cannot spend yet while other companies need money to spend now. Hence, both the need and means for credit appear. If some company A expects to make, say, 110 BTC from a 100 BTC investment but only has 70 BTC in its accounts, it could take a loan of 30 BTC from some company B with 10% interest rate and still make $10 - 3 = 7$ BTC of profit. For the company B which

lends A 30 BTC, this business—if successful—is also better than just sitting on those 30 BTC which earn exactly nothing. If growth is demanded, having money sitting idly in one’s vaults while someone else could invest and augment it is a poor business decision.²⁹ This simple form of credit hence develops spontaneously under free market conditions.³⁰ The consequences of this fact are not lost on Bitcoin adherents. As of writing, there are several attempts to form credit unions: attempts to bundle up the money people have in their wallets in order to lend it out to others—for interest, of course.

Furthermore, under the dictate of the free market, success itself is a question of how much money one can mobilise. The more money a company can invest the better its chances of success and the higher the yield on the market. Better technologies, production methods, distribution deals and training of workers, all these things are available—for a price. Now, with the possibility of credit the necessity for credit arises as well. If money is all that is needed for success and if the right to dispose over money is available for interest then any company has to anticipate its competitors borrowing money for the next round of investments, rolling up the market. The right choice under these conditions is to apply for credit and to start the next round of investment oneself; which—again—pushes the competition towards doing the same. This way, the availability of money not only provides the possibility for credit but also the basis for a large scale credit business, since the demand for credit motivates further demand.

Even without fractional reserve banking or credit money, e.g., within the Bitcoin economy, two observations can be made about the relation of capital to money and the money supply. If some company A lends some other company B money, the supply of means of payment increases. Money that would otherwise be petrified to a hoard, kept away from the market, used for nothing, is activated and used in circulation. More money confronts the same amount of commodities, without printing a single new banknote or mining a single BTC. That

29 Of course, there are also reasons keep a certain amount of money around, such as the uncertainties of the markets.

30 An even simpler form of credit exists

between whole-sellers and producers. If, for example, the producer allows the whole-seller to pay later, he is effectively granting credit.

is, the amount of money active in a given society is not fixed, even if Bitcoin was the standard substance of money.

Instead, capital itself regulates the money supply in accordance with its business needs. Businesses ‘activate’ more purchasing power if they expect a particular investment to be advantageous. For them, the right amount of money is that amount of money which is worth investing; to have available that money which can be used to make more money. This is capital’s demand for money.³¹

Growth guarantees money

When one puts money in a bank account or into some credit union, or simply lends it to some other business, to earn an interest, the value of that money is guaranteed by the success of the debtor to turn it into growth. If the debtor goes bankrupt that money is gone. No matter what the substance of money, credit is guaranteed by success.

In order to secure against such defaults creditors may demand securities, some sort of asset which has to be handed over in case of a default. On the other hand, if on average a credit relation means successful business, an IOU—i.e., a promise of payment—itself is such an asset. If Alice owes Bob and Bob is short on cash but wants to buy from Charley he can use the IOU issued by Alice as a means of payment: Charley gets whatever Alice owes Bob. If credit fulfils its purpose and stimulates growth then debt itself becomes an asset, almost as good as already earned money. After all, it should be earned in the future. Promises of payment get—and did get in the past—the quality of means of payment. Charley can then spend Alice’s IOU when buying from Eve, and so forth. Thus, the amount of means of payment in society may grow much larger than the official money, simply by exchanging promises of payment of this money. And this happens without fractional reserve banks or credit money issued by a central bank. Instead, this credit system develops spontaneously under free market conditions and the only way to prevent it from happening is to

31 On a side note, if businesses which take out loans are successful on average, they produce more commodities: more commodities that confront the

increased supply of purchasing power. Hence, increases in the money supply, and hence purchasing power, does not necessarily mean inflation.

ban this practice: to regulate the market, which is what the libertarians do not want to do.

However, the replacement of cash by these securities remains temporary. In the most severe situation, in crisis, the means of payment available for the whole of society would be reduced back to hard cash again, which these credit tokens were meant to replace. Simply because people start distrusting the money quality of these promises of payment would lead to a collapse of trade which relies on these means of payment. In crisis, credit's purpose to replace money is void.

Central banks

This is where the central banks step in, they replace the substance of money with something adequate for its purpose: a money whose value is guaranteed by the growth it stimulates. With the establishment of central banks, the economy is freed from the limitations of the total social hoard of hard cash. If there is a lucrative business then there is credit: money which is regulated according to the needs of capital. Credit money as issued by a central bank is not a promise of payment of money, it is itself money. The doubt whether these promises of payments are actually money ought to be put to rest by declaring them as money in the first place.

Now, the value of modern credit money is backed by its ability to bring about capitalist growth. When it facilitates this growth then—and only then—money fulfils its function.

Hence, something capital did to money before, is now 'built in'. The central bank allows private banks to borrow (sometimes buy) additional funds—for interest—when needed. The money they borrow is created by the central bank 'out of thin air'. Hence, all money in society comes into being not only with the purpose of stimulating growth but also with the explicit necessity: it is borrowed from the central bank which has to be paid back with interest. While clearly a state intervention, the central banks' issuing of money is hardly a perversion of capitalism's first purpose: growth. On the contrary, it is a contribution to it.

Systematic enmity of interests, exclusion from social wealth, subjection of everything to capitalist growth—that is what an economy looks like where exchange, money and private property determine production and consumption. This also does not change if the substance

of money is gold or Bitcoin. This society produces poverty not because there is credit money but because this society is based on exchange, money and economic growth. The libertarians might not mind this poverty, but those on the Left who discovered Bitcoin as a new alternative to the status quo perhaps should.

Free Property: on Social Criticism in the Form of a Software Licence

The open-source/free-software movement has quite a good reputation on the Left.¹ This is not simply because of the fact that open-source developers provide things for free which usually cost money, but also because the free-software movement often is regarded as an opposition or even a practical counter project to capitalist private property. Hence, this text investigates the apparent contradiction that a licence—an assertion of ownership—guarantees universal access, while being simultaneously adopted and promoted by multinational IT corporations for their own profit.

Intangible goods are different...

Indeed, at least some people within the movement do seem to be bothered about property, at least where it specifically affects digital goods. Indeed, in terms of what they actually are, physical goods and so-called ‘intangible’ goods differ.

If someone uses my bike I cannot use it at the same time. Ideas, however, such as those expressed in this text, can be distributed and shared with others without ever running out of them. For example, we do not know less of the content of this text when the readers know more about it. But still: reading the text, comprehending it, finding mistakes that we might have made are intellectual efforts every time we accomplish them—activities that are both time consuming and full of preconditions, e.g., one is required to have learned how to read.

1 The open-source/free-software scene partly acrimoniously fights over the question whether it is ‘open source’ or ‘free software’ that they develop. The former is a particular mode of developing software, the latter a comprehensive approach to software in general; it is a demand, sometimes even called ‘philosophy’, for what one shall be able to do with software. In our

text we often use the term ‘open source’ simply because it is better known. To be entirely correct we would have to almost always write ‘free software’ though, as our criticism is directed towards the comprehensive claim of this movement, as opposed to the simple endeavour of making software development more effective.

Hence, distribution is not to be had entirely ‘free’ and without any (basic) requirements. The text itself, however, and the information it contains, bears the particular feature that it can be copied (and, by implication, transferred, displayed, made available, in short: used) any number of times. Once certain (basic) requirements are established (e.g., a computer is at hand, an Internet connection is up and running), it is fairly cheap to duplicate a file containing this text—the effort becomes close to zero at some point.

...and with them, property appears differently

It seems an ‘artificial’ and unnecessary restriction to stamp private property on ideas, files or other ‘containers of information’ milling about—for the single reason that one is used to copying those files. From this, first of all, it may be noted that the quality of being property is *ascribed* to things. It is not a characteristic inherent to them, i.e., necessarily or naturally ‘comes with’ things. Secondly, it is apparent that it is not *allowed* to make copies of some files, e.g., most music. It is forbidden, illegal, to distribute such files. With regard to files this seems, at first sight, rather absurd since their distribution neither changes nor damages their content. So, when it comes to ‘intellectual property’ property appears differently. Namely, it appears more obviously that state authority restricts its use through patent, copyright and other laws. This way it becomes very distinctly recognisable what property actually is—a barrier.

Moreover, scientific and technical results were products of collaboration long before the beginning of digital information processing. This is because even the smallest discovery or invention is based on a host of other discoveries and inventions; so many that the respective originators only know a fraction of the sources from which their content derives. Mathematical findings are based on other mathematical findings, software is based on ideas found in other software packages or relies on those packages directly.² Thus, in order to make progress in research and development, access to what is already known is required. If nowadays

2 With regard to the production of software it is common (and quite sensible) to put frequently used features into

separate packages which then are used in various products. Those packages of features are aptly called libraries.

intellectual property titles continuously are used and defended, i.e., if access and applicability of existing information is restricted by law, then this prevents the development of new ideas. Property appears as something arbitrarily separating that, which essentially belongs together. Not only is property a barrier to access to existing things or knowledge but even a barrier to the discovery and development of new ones.

The absence of property relations as norm

The concept of open source emerged alongside the development of mainframes, personal computers and the Internet and it also pushed these developments forward. The starting point for the open-source movement was the acknowledgement of some particular qualities of digital goods, especially their lossless reproducibility and the implications for software development that come with this quality. The movement's protagonists knew how to take advantage of those qualities in their work and, hence, focused on their social requirements. It was a new phenomenon to concern oneself with this topic in the beginning of the field of computer science. From around the 1950s on, free access to and a de facto unrestricted use of all required information went without saying—at least with regard to software. This, anyhow, applied to people with the respective knowledge working at the relevant, well-equipped research institutions. Software simply was a free add-on that came with massive, expensive mainframes. Accordingly, it was openly distributed, studied and changed.

Only from the mid-1970s, a market for proprietary software developed—i.e., software that one is not allowed to freely modify and distribute. Companies such as Microsoft started doing business by selling software and especially licences granting the right to use this software.³ People such as Richard Stallman—founder of the GNU Project, the best-known free-software licence, the General Public License (GPL)—stepped up against this new movement in order to retain the status quo. Stallman and his colleagues developed software together and their demand was that others should be able to study,

3 Bill Gates' letter to the Homebrew Computer Club is an interesting historical document highlighting the

necessity to justify privatisation in the beginning of this new development: <http://goo.gl/ferzK> (digibarn.com)

use and distribute their products. Indeed, from the standpoint of well-planned production of useful things, this is a sensible position.

Property—a standard for the world of physical things?

The open-source / free-software movement started off with the GNU Project. It is important to this movement today that property relating to intangible goods has to play an inferior or different role than property regarding other, i.e., material, things. The reason for this—according to this movement—is to be found in the particularity of intangible goods themselves.

For example, the German Pirate Party—as other Pirate Parties concerned with issues at the crossroad of democracy and the digital life—writes in its manifesto

Systems that obstruct or prevent the reproduction of works on a technical level ('copy protection', 'DRM', etc.) *artificially reduce* their availability in order to turn a free good into an economical good. The *creation of artificial shortage for mere economical interests* appears to us as amoral; therefore we reject this procedure. [...] It is our conviction that the non-commercial reproduction and use of works should be *natural*; and that the interests of most originators are not negatively affected by this—despite contrary statements of particular interest groups.⁴

With regard to digital goods, the members of the Pirate Party complain that by means of a title of ownership access to information is 'artificially' prevented, which goes against information's 'natural' feature of being copyable: "information wants to be free". At the same time, they see no reason to make the same claim for material things. According to the logic of the party's political programme those are 'economical goods' quite by themselves. An assumption that seems so self-evident to the authors that they do not explicitly mention it.

4 cited after <http://goo.gl/zyA2Z> (piratenpartei.de), last accessed

November 2012, our translation, emphasis added.

The GNU Project, on the contrary, explicitly addresses the assumed distinction between non-material and material

Our ideas and intuitions about property for material objects are about whether it is right to take an object away from someone else. They don't directly apply to making a copy of something. But the owners ask us to apply them anyway. [...] But people in general are only likely to feel any sympathy with the natural rights claims for two reasons. One reason is an *overstretched analogy with material objects*. When I cook spaghetti, I do object if someone else eats it, because then I cannot eat it. His action hurts me exactly as much as it benefits him; only one of us can eat the spaghetti, so the question is, which one? The smallest distinction between us is enough to tip the ethical balance. But whether you run or change a program I wrote affects you directly and me only indirectly. Whether you give a copy to your friend affects you and your friend much more than it affects me. I shouldn't have the power to tell you not to do these things. No one should.⁵

However, this distinction between material and non-material goods is not correct.

1. The GNU Project claims that a difference between spaghetti and a program is that the former can only be consumed by one person, while the latter can be used by indefinitely many people. Hence, for the GNU Project the former implies the need for private property while the latter does not. Yet, under the regime of property it does not matter whether an owner actually uses her stuff or not. When people think about property in material goods they have their personal belongings in mind, things they need more or less regularly. But this is not the main point of private property—the way it works is much more far reaching and

5 <http://goo.gl/qaVUg> (gnu.org), emphasis added.

fundamental. For example, squatted houses get evicted to stand empty again, pieces of woodland are fenced in by their owners who live elsewhere or supermarkets lock their bins to prevent people from dumpster diving. The question whether someone could make use of something is subordinate to ownership, not the other way around. Property applies no matter whether the owner or someone else—e.g., in return for payment—uses it. Making successful claims to an absolute disposal over wealth of whatever kind and whatever quantity regardless of neediness—this is private property. Regardless of material or intangible goods—the regime of property does not care who wants to use what and how. Whereas it is true that only one person can eat one's fill given only one serving of spaghetti, under the regime of private property to own spaghetti is the condition for eating them, but the desire to eat them does not establish ownership. So, in this respect the material vs. non-material distinction is wrong.

2. In one respect though, need does play a role—namely a negative one. Property in a machine indicates the exclusion of third parties from using that machine. One cannot enter into an ownership relation with a machine because a machine is not eligible for a legal relationship. It is the same with a disc containing a copy of a Windows operating system on it. One is not allowed to install it merely because this disc lies around somewhere unused. The particular function of a title of ownership—for the owner—is strictly that others may not use her property without her consent, even though they might want to and perhaps even be physically able to do so. What friends of free software notice and highlight with regard to digital goods, could also be observed with regard to ordinary material things: it is a fact that property is a relationship between people in regard to things, but not immediately between things and people. If no one else is there, it does not really matter what belongs to me or what I simply use. This only becomes relevant when others want to have access, too. Property is a barrier between those who want to use a thing and the thing itself, between need and the means to satisfy it. The guarantee for property in material things does not exist despite but because

people want, need, require them. To own bread and all the more to own a bread factory is significant because other people are hungry. Otherwise, what would be the point of guaranteeing the right of exclusive disposal?

3. Furthermore, with respect to reproducibility a rigorous contrast—material vs. intangible—also does not exist. It is possible to produce things and this means nothing else than to eradicate the detected scarcity. There is no such thing as a particular finite number of bread knives in the world, more can be manufactured. Indeed, one has to do something for it, but nothing simply is “in short supply”.⁶ However, in order to manufacture something one has to have access to the means of production which, again, are also privately owned. And in this regard—again—it does not matter whether one ‘really’ needs them or whether they are currently in use.

Yet, there is indeed a difference between software and bread knives: the contemporary means of production for software meanwhile are cheap mass products that most people have at home anyways. One can write a lot of state-of-the-art software with a five year old computer from a car boot sale.⁷ Thus, the production of software ‘only’ requires an investment of education and labour time, while, when it comes to, e.g., bread knives one is excluded from the means of production at the level of the state-of-the-art. In order to be able to produce bread knives one would indeed need the corresponding factory, and this wants to be bought first.

6 Hence, it is ridiculous that economists, for example, constantly present beach houses and famous paintings to illustrate their theories. They choose examples that indeed have the feature of being in short supply in order to say something about things such as bread, flats, cars and clothing. In other words, they use things as examples whose quantity cannot easily be increased by production in order to explain the

economy, i.e., the sphere where things are produced.

7 This is currently changing so that this statement may no longer be true in a couple of years. If software runs on large networks of computers that together calculate something then a ten year old computer may not be the adequate means of production any longer.

4. The means of production are not simply “in short supply” either, but can also be produced, by and large. One is excluded from the means of production as their purpose for the owner is access to the wealth of society in the form of money. The owner knows she has to come to agreements with others in order to get their products. Hence, she uses her factory—as well as people who do not have one, i.e., workers—to manufacture something that she can sell. With the proceeds she then can either buy goods for herself or she can reinvest in workers and means of production so that another round of fun may commence. In a society based on the division of labour, one is dependent on others and their products, be it intangible or material goods. Because in this society this trivial fact does not lead to a self-conscious interaction of producers but rather the regime of property prevails, one is excluded from the products of others and therefore is required to exploit their needs to one’s own advantage. This absurdity can be put differently: it is precisely because one is dependent on the others that one insists on the exclusion of others from what one owns. If everyone gives only if given an equivalent in return, then certainly it makes sense to deploy what one has as means of access to the stuff under the control of others by matching their exclusion with one’s own.

Property is characterised by exclusion whether it concerns material or immaterial goods. The free-software movement disagrees though—and it shares this fallacy with the majority of people. In other words: the political wing of the free-software movement insists on drawing a strict distinction between digital and material goods in order to criticise the regime of property regarding digital goods. Yet, it is exactly their line of argument that reaffirms the exclusion from the things people need: the regime of property. The slogan “free software today, free carrots tomorrow” of radical free-software activists might sound catchy, the reference to the free-software movement’s ‘criticism of property’, however, takes up the false idea that carrots can never be free and for all instead of critiquing it.

Copyleft licences—critique of property law by legal means

Access to open-source software is defined and regulated in legal terms. First of all, copyright law applies regardless of what the author chooses to do. This law forms the general basis and is applied by the state to anything it considers to have a creator. But moreover, an open-source licence determines what anyone else is allowed and not allowed to do with, say, a piece of software by means of the law—no difference from other areas of bourgeois society. Usually open-source licences allow to read, modify and further distribute the source code.⁸ The various licences differ considerably in terms of their precise provisions. Roughly, there are two versions of openness. The above mentioned GPL determines that any program using software parts licensed under the GPL has to entirely be licensed under the GPL or a compatible licence as well. This means that the licence is ‘virulent’ and components mutually affect each other. It is, for instance, not allowed to simply take the Linux kernel (i.e., the operating system’s core) modify it here and there and then distribute the result without also releasing the source code of the modifications. In contrast, the BSD-family of licences is less strict.⁹ BSD programs are part of Microsoft Windows, for example, and there is no obligation to publish any source code. The licence mainly stipulates what must happen if source code is distributed, namely that copyright holders must be named. Secondly, it provides that no one may sue the authors in case something goes wrong. An exclusion of liability: the software is provided ‘as is’. Both camps—GPL vs. BSD—do not get tired arguing these differences. The GPL camp holds that liberty is to be protected by force whereas the BSD camp is convinced this way liberty is lost.¹⁰ Who is right,

8 Source code means the software program in a certain language that humans are more or less able to read... well, except Perl.

9 BSD stands for Berkeley Software Distribution

10 Which licence to choose sometimes simply may have economic reasons. Most of the open-source software in the field of applied mathematics is licensed under a BSD-style licence as

companies within this sector often do not intend to sell but use the software themselves. They also only collaborate on the terms that they may do so quite unrestrictedly. On the contrary, most of the open-source software in pure mathematics is licensed under the GPL: the only companies interested in these software packages are those making money from selling such software. That way the (often academic) authors

whether this question even can be settled or not or whether it cannot be conclusively answered because this type of freedom includes its opposite—domination—is perhaps better saved for another text. Here, we may conclude, though, that this kind of practical criticism of property necessarily presupposes a title to (co-)ownership in a software product. This is the reason why Richard Stallman calls the GPL a “legal hack”, i.e., a trick on legal grounds¹¹: one insists on one’s property by way of claiming the terms of a licence in order to guarantee free access.¹²

But, “you can’t hack the law”¹³. The legal system—guaranteed by the state’s authority—cannot be tricked: licences (no matter what kind) are legally binding contracts following the logic of the law that, in doubt, always can be enforced in case one of the contracting parties claims its right.¹⁴ The result of this is that, e.g., scientists who make their research-software available to others have to deal with a maze of different incompatible licence versions. Hence, questions such as the following arise: am I legally allowed to combine another scientist’s open-source software with my own?¹⁵ A creative use of and tricking the

protect themselves from being sold their own software as part of such commercial software.

11 It does not come as a surprise that he attempts to creatively apply the law. After all, he does not have a problem with the fact that daily needs cost money, i.e., that someone insists on his ‘every right’ to get paid: “Many people believe that the spirit of the GNU Project is that you should not charge money for distributing copies of software, or that you should charge as little as possible—just enough to cover the cost. This is a misunderstanding. Actually, we encourage people who redistribute free software to charge as much as they wish or can.”—<http://goo.gl/k61XI> (gnu.org).

12 By the way: in no way does an open-source licence mean that one gives up ownership. The licence terms always apply to others (i.e., the users) only, whereas the owner is of course free to do whatever she wants with her

property. This is the base of a business model by which one makes available a (restricted) version of a product as open-source software and at the same time a(n optimised) version is sold as usual.

13 Cindy Cohn, Legal Director for the Electronic Frontier Foundation. It should be noted, though, that her meaning of hacking the law is rather different, if not contrary, to ours. See <http://goo.gl/Xs04x>.

14 In the leading capitalist countries, the GPL ‘trick’ meanwhile has been accepted as legally binding. This means that it is possible to sue someone in case of violations against the General Public Licence. If such a lawsuit is successful a party can be forced to release all source code of its product incorporating GPL code.

15 It is possible that the answer to this question is ‘no’, an example from the area of mathematical software highlights this: <http://goo.gl/VTSMZ> (gmplic.org)

law—Stallman & Co. (ab-)use the law—turns into principal submission to the law—the law dictates Stallman & Co. its terms—that is how the law works.

Moreover, such a ‘hack’ develops its very own dynamic in a society of law appreciating citizens. The field in which licences are applied in this manner has meanwhile massively grown. The Creative Commons movement¹⁶ recommends scientists, creative artists as well as hobby photographers uploading their holiday snapshots to the Internet to claim ownership of their respective products of information. They are encouraged to exclude third parties more or less from using such products by choosing from a toolbox of legal restrictions. Contrary to Richard Stallman, the Creative Commons initiative by Lawrence Lessig does not problematise the really existing copyright regime. Hence, the initiative quite correctly notes:

Creative Commons licenses are copyright licenses—plain and simple. CC-licenses are legal tools that creators can use to offer certain usage rights to the public, while reserving other rights. Without copyright, these tools don’t work.¹⁷

Meanwhile, even things that a few years back no one would have expected to be ruled by copyright law, such as the above mentioned holiday snapshots, are now subsumed under its regime.¹⁸

How deeply ingrained the formalism of the law is in these peoples’ minds is aptly expressed by the controversy around the DevNations 2.0 Licence and its subsequent withdrawal.¹⁹ The DevNations 2.0 Licence stipulated that people from ‘developing countries’ were allowed to use

16 The Creative Commons (CC) movement emerged in response to branches of industry where direct producers such as musicians usually sign over considerable rights to record corporations—i.e., loose the ownership in their own products. That is somewhat similar to a factory worker who also does not own one single product he manufactured. In contrast, CC-licences first of all mean the claim of ownership of one’s own product.

17 <http://goo.gl/RWBma> (creativecommons.org)

18 On Flickr—a not as popular as it used to be photo sharing website—one is bothered with the question which licence ought to be applied to one’s photos, a rather absurd thought in the first instance.

19 See <http://goo.gl/16tnp> and <http://goo.gl/stHiE> (creativecommons.org)

products under the licence free of cost whereas people from capitalist centres were not entitled to this. Hence, it was a licence that at least acknowledged real material differences.²⁰ The licence was withdrawn because of its discrimination against people living in rich countries. Hence, it violated the equality before the law; but this equality, i.e., non-discrimination, is a requirement for any licence hoping to be verified as an open-source licence by the Open Source Initiative. If the open-source movement is said to have started off with a criticism of property—even if restricted to intangible goods—or that it was bothered by people being excluded from the digital wealth of societies, then it is safe to say it achieved the opposite: you cannot hack the law. What remains is to (practically) critique it.

Software commons for profits

The open-source movement succeeds because it gets along well with an IT industry whose prosperity is otherwise based on every known principle of private exploitation. In the following we give some short examples to illustrate how business and open source work hand in hand, i.e., to unpack the apparent contradiction of making money from something that is made available for free.

The Mozilla Foundation—known for its web browser Firefox—receives a good deal of its income from Google Inc., as Google Inc. pays so that the browser's default search engine is Google. Apple's operating system OS X is built upon an open-source foundation: Darwin. Apple now and then even collaborates in open-source projects using the results of this collaboration to sell hardware, software packages, films and music—lately rather successfully we hear. Furthermore, according to a study only 7.7% of the development of the kernel of the Linux operating system was explicitly non-paid volunteer work.²¹ Red Hat Linux, IBM and Novell are the biggest companies directing their employees to collaborate on this operating system: each one of them a global player on the international IT-market. They co-develop Linux in order to do profitable business with it. For example, they sell applications

20 Our elaborations on property earlier indicate that poverty cannot be abolished by means of such licences.

21 In case of 25% of the work it remains unclear if anyone or anything was paid. See <http://goo.gl/Rl4EG> (lwn.net)

that run on Linux or provide support contracts to companies: you buy our product, we make sure everything runs smoothly. Companies pay for this service even though it would be possible to compile the result by means of open-source projects themselves—to save the hassle. Google distributes its operating system Android and its web browser under an open-source licence—especially so that users of smart-phones use Google’s products by which Google directly or indirectly makes money by means of advertising. Many companies contribute to developing the GCC-Compiler because it is a central piece of infrastructure for every software company.²² Co-development is cheaper than to independently create alternatives. Meanwhile even Microsoft published some products under open-source licences.

Modern politicians concerned with the economic success of their respective nation-states, being entirely unsuspecting of having a thing for moving and manipulating bits and bytes, have understood the power of open source—by all means, they promote and encourage the blossoming and expansion of this infrastructure which is collectively available. On the one hand, this is to strengthen the economy of their nation-state, on the other, it simply is cheaper for their own administrative bodies to use open-source products. By the way, long before the C64²³, bourgeois states provided fundamental research and knowledge for the benefit of the national economic growth by means of its university system. It is hence fitting that the two most popular open-source licences (GPL and BSD) were developed at American top-tier universities (MIT and Berkeley).

The bourgeois state also realised that its patent law not only enables the private exploitation of innovations but also serves as a barrier—and in this regard it does appreciate the worries of open-source / free-software

22 GCC stands for the GNU Compiler Collection, a collection of compilers by the GNU Project. A compiler translates programs from the source code into a format which then can be executed on the respective computer. Free software does not make much sense without a free and reasonable compiler. If the compiler is not openly available it is in

fact possible to change software in its source code, but the changes cannot be applied—unless you buy a licence for a compiler. If it is a poor compiler open-source programs are disadvantageous to the proprietary competition.

23 The Commodore 64 was a popular personal computer in the 1980s.

activists. For, if existing innovations cannot be used for the development of new ones that means bad prospects for economic growth. So, the bourgeois state implemented a patent law that grants patents for a certain period of time only. Regarding the exploitation and perpetuation of technology it provides a mediating form for the competing interests of individual capitalists—in the interest of total social capital. On the one hand, individual capitalists want to massively exploit their patented inventions by excluding every non-payer from the use of those patents. On the other hand, they want to use others' patents as basis and means for their own success.

Within the cultural sector, where CC-licences are widely used, things are the same. Incidentally, this also applies to those that choose a non-commercial CC-licence for their products which allows the use on a non-commercial basis only and serves the purpose to exclude others from monetarily profiting from ones own output. This right is reserved to the person uploading a holiday snapshot or producing a music track. The whole concept has nothing to do with the critique of a society that is based on the principles of reciprocal exclusion from useful things and in which every individual necessarily relies on her own property or labour-power. There is no critique to be found in insisting on the right of the creator—this is the owner's competitive position vis-a-vis the competition.

Published in London in January 2013 by
The Wine & Cheese Appreciation Society
of Greater London
<http://antinationa1.org/en>

Designed by Afonso Martins.
Typeset in Stempel Schneidler.

